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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/992,052	11/23/2001	Hajime Homma	NEC 01FN050	4465

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Norman P. Soloway
HAYES, SOLOWAY, HENNESSEY,
GROSSMAN & HAGE, P.C.
175 Canal Street
Manchester, NH 03101

EXAMINER

TRAN, HENRY N

ART UNIT	PAPER NUMBER
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2674

DATE MAILED: 09/23/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/992,052

Applicant(s)

HOMMA, HAJIME

Examiner

HENRY N. TRAN

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 November 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

This Application has been examined. The original claims 1-13 are pending. The examination results are as following.

Information Disclosure Statement

1. The examiner has considered the references listed in the information disclosure statement (IDS) filed 11/23/01 (Paper No. 2) (see the attached form PTO-1449).

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 10 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Amemiya (U.S. Patent 5,877,734).

Amemiya teaches an apparatus and a method for driving a plasma display panel, comprising the step of executing sustaining discharge of display cells $P_{i,j}$ at an interval of one cycle alternately (sustaining discharge pulses P_{sx} and P_{sy} are continuously and alternately applied to a pair of row electrodes X_i , Y_i for executing sustaining discharge in the pixel cells $P_{i,j}$ during a sustaining discharge period (c), see figure 4, col. 12, line 57 to col. 13, line 4) (claim 10). Amemiya also teaches the voltage of the sustaining pulses P_{sx} and P_{sy} are alternately

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changed between Vs and 0; and the sustaining pulses applied to the scanning/ sustaining electrodes Xi, Yi are a predetermined number based on pixel data (see figure 4; col. 8, lines 22-24). Claims 1, 10 and 11 are therefore rejected.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2-9 and 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Amemiya (U.S. Patent 5,877,734) in view of Kanazawa et al (U.S. Patent 6,559,814).

Amemiya further also teaches the steps of: making a pulse width of the positive sustaining pulse Psx1 applied to the shared sustaining electrodes X1-Xn wider than the following positive sustaining pulse Psx2 (see figure 7; and col. 13, lines 5-36); making a difference in potential between row electrodes Xi, Yi when the shared electrode Xi is applied with a positive sustaining pulse (see figure 5). However, Amemiya does not teach expressly the method steps are applied for an interlace scanning method and a progressive scanning method using sub-fields configurations, wherein one or more sub-fields with an interlace method, and one or more sub-fields with a progressive method, and a plurality of sub-fields constituting one field; and making a width of, or a difference in potential of the sustaining discharge pulse between row electrodes narrower, or smaller when the shared electrode functions as a negative electrode. Kanazawa et al teaches a system and a method for driving a plasma display panel, comprising the steps of:

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configuring a plurality of sub-fields for constituting a display field or frame, utilizing interlace scanning and progressive scanning methods for a predetermined number of sub-fields; and adjusting the discharge sustaining pulses to have a voltage difference between discharge electrodes which forming a pair for a non-display line in a field having the same phase for making a zero or smaller potential difference (see figures 3-5; col. 3, lines 22-49; col. 4, lines 24-55). It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the sub-fields and scanning methods as taught by Kanazawa et al in the Amemiya device for producing the claimed invention because this would produced an improved plasma display system, which is capable of proving high quality display images, which have no flicker (see Kanazawa, col. 4, lines 55-57). Claims 2-9 and 12-13 are rejected on the same reasons set forth in claims 1 and 10, and by the reasons discussed above.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. They are:

- Kanazawa (U.S. Patent 5,835,072) teaches a sub-field driving method for a plasma display panel, wherein, applied voltage and a sustaining discharge period are varied for effecting display luminance;
- Shinoda (U.S. Patent 5,541,618) discloses an apparatus and a method for driving a Plasma Display Panel using subframe driving technique; and
- Moon (U.S. Patent 6,384,802) teaches a PDP driving method applicable to an interlace system as well as a progressive system for improving a display brightness.

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7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to HENRY N. TRAN whose telephone number is (703) 308-8410. The examiner can normally be reached on Mon - Fri from 8:00AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, RICHARD A. HJERPE, can be reached at (703) 305-4709.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

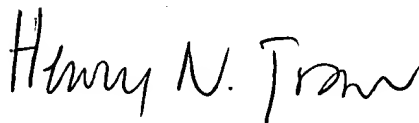
Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office Whose telephone number is (703) 306-0377.



HENRY N. TRAN
Examiner
Art Unit 2674

hnt
September 10, 2003